

What is claimed is:

- 1 1. A method of streaming media to a client comprising:
2 receiving a request from a client for a media stream;
3 computing a receiving procedure for the client;
4 transmitting the receiving procedure to the client;
5 initiating a first multicast stream such that the client can utilize the
6 receiving procedure to receive a first portion of the media stream from the first
7 multicast stream and a second portion of the media stream from a second
8 multicast stream.
- 1 2. The invention of claim 1 wherein the client can further utilize
2 the receiving procedure to receive a third portion of the media stream from a third
3 multicast stream.
- 1 3. The invention of claim 1 wherein the receiving procedure is
2 computed after a step of computing a merge tree incorporating the request from
3 the client.
- 1 4. The invention of claim 3 wherein the merge tree is a Fibonacci
2 merge tree.
- 1 5. A method of streaming media to a plurality of clients
2 comprising:
3 receiving reservation requests for a media stream from a plurality
4 of clients;
5 constructing a merge tree based on the reservation requests;
6 scheduling a plurality of multicast transmissions of the media
7 stream based on the merge tree.
- 1 6. The invention of claim 5 wherein the merge tree is constructed
2 to minimize the cost of the merge tree.

1 7. The invention of claim 6 wherein the merge tree is a Fibonacci
2 merge tree.

1 8. The invention of claim 5 wherein the merge tree is constructed
2 to minimize the cost of a forest of merge trees further comprising the merge tree.

1 9. A method of streaming media to a plurality of clients
2 comprising:
3 constructing a merge tree based on anticipated requests for a media
4 stream;
5 scheduling a plurality of multicast transmissions of the media
6 stream based on the merge tree.

1 10. The invention of claim 9 wherein the anticipated requests for
2 the media stream are scheduled to arrive at every time unit.

1 11. The invention of claim 10 wherein the merge tree is a
2 Fibonacci merge tree.

1 12. The invention of claim 9 wherein the merge tree is a static
2 merge tree with a fixed number of nodes.

1 13. A method of streaming media to a client comprising:
2 receiving a request from a client for a media stream;
3 taking a first merge tree further comprising a right frontier and
4 constructing a second merge tree which incorporates the request into the right
5 frontier of the first merge tree; and
6 scheduling a plurality of multicast transmissions of the media
7 stream, including a multicast transmission to the client, based on the second
8 merge tree.

1 14. The invention of claim 13 wherein the second merge tree is
2 constructed to minimize an incremental merge cost.

1 15. The invention of claim 13 wherein the second merge tree is
2 constructed such that the request is represented as a node of a parent node in the
3 first merge tree closest to the node.

1 16. The invention of claim 13 wherein the second merge tree is an
2 infinite merge tree.

1 17. The invention of claim 16 wherein the infinite merge tree is an
2 infinite Fibonacci merge tree.

1 18. A machine-readable medium comprising executable program
2 instructions for performing a method on a computer comprising the steps of:
3 transmitting a request for a media stream to a server;
4 obtaining a receiving procedure from the server;
5 in accordance with instructions in the receiving procedure,
6 receiving and buffering a first portion of the media stream from a first multicast
7 channel while receiving and buffering a second portion of the media stream from
8 a second multicast channel.